importance of this subject to the practising physician must ever be great, not only from the number of organs and tissues it affects, but also from the vast number of pathological conditions it alone explains. He must ever be on the alert to detect it; and, where it exists, it must, to a greater or less extent, modify his practice.

Treatment.—From what has already been said upon the causes of fatty degeneration, the course of treatment most likely to stay the progress of the disease, and, if possible, to restore the degenerated tissue, is readily inferred; namely, to sustain the vital powers, and preserve the organic functions in due activity; to improve the condition of the blood, making it rich in highly vitalized fibrin and albumen, by a diet of lean meats, bread, and succulent vegetables, excluding all articles rich in fat, with sparing use of sugar and fermented liquors; to promote free circulation and full respiration, by regular exercise in pure air; to restore healthy action of the skin, by bathing and friction; and to keep up a full and healthy action of the bowels. The tonics, iron, bark, and the mineral acids, especially the nitro-muriatic, have been found to be of decided utility. From the tendency which the fatty matter in degenerations has to assume the solid form, Dr. Williams suggests the use of cod-liver oil as a solvent of the fatty concretions.

ART. III.—*New Mode of Extension in Fractures.* By JOSIAH CROSBY, M. D., of Manchester, N. H.

THE great objects to be accomplished in the treatment of fractures—apposition and rest—are well understood by every surgeon; how to accomplish these objects has not been so well settled.

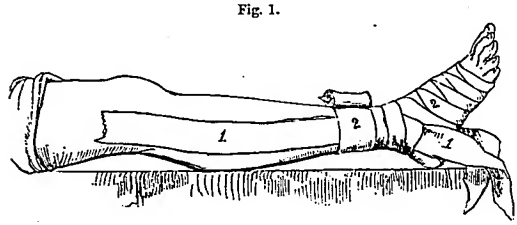
In transverse fractures of the leg there is very little difficulty in the treatment. I shall, therefore, confine my remarks to oblique, compound, and comminuted fractures, and to such of these only as require permanent extension.

A great variety of splints has been invented for the permanent extension of broken legs, many of which would accomplish the object in a very satisfactory manner, but for the great difficulty in attaching the limb to the extending force. The garter, cravat, and shoe, with many others, have been tried, and condemned for producing pain, inflammation, and sloughing. It is to this cause more than to all others we are to look for the shortening and deformity of so many broken legs.

Fig. 1 represents the application of strips of adhesive plaster to the legs by which we attach the limb, in case of fractured thigh, to whatever instrument is used for permanent extension. 1 1 represent strips of cotton cambric spread with common adhesive plaster, to be applied one on each side of the

leg, long enough to extend from above the knee to the ankle, the ends from the ankle hanging loose below the foot several inches, unspread, to be tied to

Fig. 1.



the instrument by which extension is made. These strips should be from two to five inches wide, according to the size of the limb, and should be recently spread. The leg should be shaved before the plasters are applied. 2 2 represents a roller applied from the toes to the knee, to confine the adhesive strips to the leg, and prevent swelling.

This is the method of applying the extending force, which I used, for the first time, in 1849, and which I have reason to believe had never been suggested to the profession in a manner to attract the attention of surgeons, until it appeared in Prof. Mussey's *Surgical Report* to the American Medical Association, at their session in Cincinnati, in 1850.

By this method, any necessary amount of force may be applied for the purposes of *setting* the bone and keeping the limb sufficiently extended without pain or inconvenience to the patient.

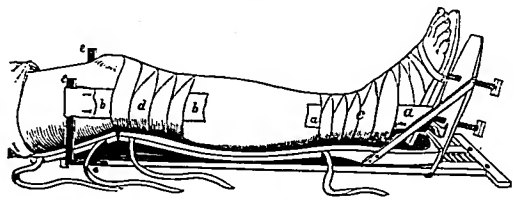
Having found this method of extension so satisfactory to myself in the management of several cases of fracture of the thigh, and from the opinions expressed to me of its superiority over all other methods by Professors Mussey, Parker, Kimball, and Crosby, and also by the distinguished surgeons of the Massachusetts General Hospital, where it was early introduced, I was induced to try it in fractures between the knee and ankle, to produce both extension and counter-extension in all injuries requiring such extension.

Fig. 2 represents Goodwin's splint,[1] with the addition of the irons, *e e*, screwed to the edges of the base of the splint, four or five inches above the knee-joint; *a a* are strips of adhesive plaster applied one to each side of the ankle, higher or lower, according to the location of the fracture; *b b*, adhesive strips running from below the knee upwards, to be passed round the irons *e e*, and pinned below them; *c*, strips to be passed round the foot and ankle, to

[1] Goodwin's splints are now in very general use in this part of the country, and may be obtained by addressing an order to the present proprietor, Henry S. Smith, Ashfield, Mass.

keep the longitudinal strips firmly attached, and to prevent swelling; *d*, strips to pass round the leg below the knee to fasten the longitudinal strips. The circular strips may be spread with adhesive matter, or not, as may suit the surgeon. I have generally used them spread, as being more certain to hold the extending strips.

Fig. 2.



My method of dressing a fractured leg below the knee, requiring extension, is in the first place to shave the leg, and then apply fresh-spread adhesive plaster, as represented by the plate, then to place on the splint a cushion of some sort, extending from a little below the foot to the knee; on this lay a piece of oiled silk, to keep the cushion from becoming wet; on this place a many-tailed bandage, in strips; having made these preliminary arrangements, and screwed the foot-board as high up as possible, assistants should raise the leg so high that the splint, with all its appendages, can be placed under the limb, letting the foot rest against the footboard; the foot is now to be made fast to the extending apparatus by tying the floating ends of the longitudinal strips to the footboard. The assistant is now to extend the limb upwards on the splint, as far as he can easily, and hold it while the surgeon pins the loose ends of the adhesive strips, above the knee, around the irons *e e*.

The whole thing is now completely under the control of the surgeon; he can extend the limb by turning the screws until it is at its full length. This may be accomplished at once, or he may be several days in doing it. When the limb is extended as much as is desirable for the first dressing, one course of the many-tailed bandage should be folded over it, and kept wet with cold water. The limb should be treated in this way for several days, until the inflammation and swelling have somewhat abated, daily making extension until the limb is at its proper length. When these objects are accomplished, as early as the tenth or twelfth day, if the extension alone be not sufficient to maintain perfect apposition, after applying one course of the many-tailed bandage, as before directed, binders'-board splints may be applied, and secured by the other folds of the bandage.

The advantages of these dressings are, that the surgeon can *set* the leg with much less difficulty to himself, and with much less pain to the patient; that

extension can be more perfectly maintained; that in the inflammatory stage he can dress the limb much more loosely, and can apply his evaporating lotions with better effect; and if the fracture be a compound one, requiring to be dressed daily, it can be done with less danger of deranging the fracture.

It has been objected to this method of dressing, that the adhesive plaster will irritate the skin so that the patient cannot bear it. There may be occasionally a case of this sort, but they must be very rare; I have never seen one. In a case of compound comminuted fracture of both bones of the leg, not more than two inches above the ankle-joint, I kept these dressings applied *without change*, and without irritation, sixty days, and got a sound leg, and of proper length, after the removal of several pieces of bone.

MANCHESTER, N. H., Nov. 2, 1853.

ART. IV.—*Extracts from the Records of the Boston Society for Medical Improvement.* By WM. W. MORLAND, M. D., Secretary.

August 22. *Sunstroke.*—Dr. J. B. S. JACKSON reported the following case: An Irish labourer, 25 years old, was brought into the Massachusetts General Hospital about 4 o'clock P. M. of the 13th of August, in a state of complete coma, being perfectly unconscious. Surface of the body warm; pupils of the eyes much dilated; pulse 120, very full, but readily compressed; breathing almost stertorous. His friends stated that this state had continued for about an hour, and that it supervened suddenly while he was at work in the sun. Slight delirium subsequently manifested itself. Ice was immediately applied to the head and warmth to the feet, and the following enema administered, viz.: Olei tiglii, guttæ ij; olei olivæ ℥iss; in a pint of soapsuds. Free alvine evacuation was thus procured, and the patient soon began to show signs of consciousness.

14*th*. The following draught was given: ℞. Magnesiæ sulphatis ℥j; tincturæ sennæ compos. ℥ij; solve. Free operation from the medicine.

16*th*. The patient was discharged well.

Dr. Jackson asked if other members had lately seen cases, or would refer to any and to the modes of treatment found most efficacious.

Dr. PARKMAN mentioned the cases related by Andral in his *Clinique Médicale;* the necroscopic appearances are there detailed.

Dr. CABOT said that hot baths and stimulants were found very successful in one of the New York hospitals some years since. Bleeding did not answer in the cases then and there observed.

Dr. BIGELOW, Sen., saw a case on Sunday last—an Irishman. The pulse was small and rapid; and the patient, indeed, seemed moribund when Dr. B. first saw him; and, in fact, soon died. He had been walking for a long time exposed to the direct rays of the sun.

Dr. STRONG, several years since, saw a number of cases. There seem to be *two classes* of cases. In one the prostration of the system is marked and sudden; there is coldness of the surface, and the pulse is low; this state is